DEFENSE INFORMATION SYSTEMS AGENCY
P. O. BOX 4502
ARLINGTON, VIRGINIA 22204-4502

IN REPLY
REFER TO: Joint Interoperability Test Command (JTE)   **21 Sep 10**

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Special Interoperability Test Certification of the Tandberg® Codec Quick Set C20, Codec C60, Codec C90, and Personal Telepresence EX90 Version TC3.5.0 with Video Communication Server (VCS) Version X5.1

References: (a) DoD Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
(b) CJCSI 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
(c) through (f), see Enclosure 1

1. References (a) and (b) establish the Defense Information Systems Agency (DISA), Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.

2. The Tandberg® Codec Quick Set C20, Codec C60, Codec C90, and Personal Telepresence EX90 Version TC3.5.0 with VCS Version X5.1, are hereinafter referred to as the system under test (SUT). The Tandberg® Codec Quick Set C20, Codec C60, Codec C90, and Personal Telepresence EX90 are Video Teleconferencing (VTC) codecs that only have an Internet Protocol (IP) (10/100 Megabits per second) interface. The VCS provides the core network services that are required for the C-Series Codec Family to operate. These services include, call switching, call admission control, address resolution, and endpoint registration and class of service. The SUT met all of the critical interface and functional interoperability requirements and is certified for use within the DSN as a VTC system. The SUT also met the conditional requirements for an IP interface with the International Telecommunication Union - Telecommunication Standardization Sector (ITU-T) H.323 protocol; however, Assured Service is not yet defined for an IP interface with ITU-T H.323 protocol. Therefore, Command and Control (C2) VTC users and Special C2 VTC users are not authorized to be served by the SUT for ITU-T H.323 to ITU-T H.323 protocol VTC sessions. The SUT only offers an IP interface; therefore, the SUT requires an IP to Time Division Multiplexing (TDM) gateway to connect to the DSN. The SUT was tested with the Tandberg® Codian 3241 Integrated Services Digital Network (ISDN) gateway version 2.0. The SUT is certified for use with any gateway listed on the Unified Capabilities Approved Products List. The SUT meets the critical interoperability requirements set forth in Reference (c) using test procedures derived from Reference (d). No other configurations, features, or functions, except those cited within this report, are certified by

JITC Memo, JTE, Special Interoperability Test Certification of the Tandberg® Codec Quick Set C20, Codec C60, Codec C90, and Personal Telepresence EX90 Version TC3.5.0 with Video Communication Server (VCS) Version X5.1

the JITC. This certification expires upon changes that affect interoperability, but no later than three years from the date of Defense Information Assurance (IA)/Security Accreditation Working Group (DSAWG) accreditation.

3. This finding is based on interoperability testing, DISA adjudication of Test Discrepancy Reports (TDRs), review of the vendor's Letters of Compliance, and DSAWG accreditation. Interoperability testing was conducted by the Telecommunication Systems Security Assessment Program (TSSAP), 346th Test Squadron, 318th Information Operations Group (IOG), San Antonio, Texas, from 1 through 12 March 2010. The DISA adjudication of open TDRs was completed on 26 January 2010. Review of the LoC was completed on 16 September 2010. The DSAWG granted accreditation on 16 August 2010 based on the security testing completed by Department of Defense Component lab IA test teams and published in a separate report, Reference (e).

4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are indicated in Table 1.

Table 1. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Functional Requirements	Status	UCR Reference
IP (10/100 Mbps) ITU-T H.323	No[1]	Yes[2]	The VTC system/endpoints shall meet the requirements of FTR1080B-2002. (R)	Met[3]	5.2.4.2
			ITU-T H.323 in accordance with FTR 1080B-2002. (C)	Met	5.2.4.2
			Layer 3 Differentiated Services Code Point tagging as specified in UCR 2008, Change 1, Section 5.3.1. (C)	Met	5.2.4.2
			A loss of any conferee on a multipoint videoconference shall not terminate or degrade the DSN service supporting VTC connections of any of the other conferees on the videoconference. (R)	Met	5.2.4.2
			Physical, electrical, and software characteristics shall not degrade or impair switch and associated network operations. (R)	Met	5.2.4.2
			The VTU IP interface must be IPv6 capable. (R)	Not Met[2]	Table 5.3.5.1
Security	Yes	Certified	GR-815, STIGs and DoDI 8510.bb (DIACAP) (R)	Met[4]	3, 5.4.6

NOTES:
1 The UCR does not state a minimum required interface for a VTC. A VTC can offer any one of the following interfaces: ISDN BRI, Serial, T1 ISDN PRI, E1 ISDN PRI, and IP. The SUT consists of VTC codecs and a video communication server. The SUT only offers an IP (i.e. ITU-T H.323) interface; therefore, the SUT requires an IP to TDM gateway to connect to the DSN. The SUT was tested with the Tandberg® Codian 3241 ISDN gateway version 2.0. The SUT is certified for use with any gateway listed on the UC APL.
2 The SUT met the conditional requirements for an IP interface with the ITU-T H.323 protocol; however, Assured Service is not yet defined for an IP interface with ITU-T H.323 protocol. Therefore, C2 VTC users and Special C2 VTC users are not authorized to be served by an IP interface with the ITU-T H.323 protocol. Furthermore, the SUT does not support IPv6. The ASD/NII granted a waiver for IPv6 until 1 January 2011. As part of the waiver stipulations in accordance with Department of Defense rules of engagement for waivers, the vendor must submit a request by 31 December 2010 to have IPv6 tested before 31 March 2011 or this certification is subject to being removed from the UC APL.
3 The SUT does not support NX56 bonding in accordance with the FTR 1080B-2002. This discrepancy was adjudicated by DISA on 26 January 2010 as having a minor operational impact.
4 Security is tested by Department of Defense Component lab Information Assurance test teams and published in a separate report, Reference (e).

JITC Memo, JTE, Special Interoperability Test Certification of the Tandberg® Codec Quick Set C20, Codec C60, Codec C90, and Personal Telepresence EX90 Version TC3.5.0 with Video Communication Server (VCS) Version X5.1

Table 1. SUT Functional Requirements and Interoperability Status (continued)

LEGEND:			
APL	Approved Products List	IP	Internet Protocol
ASD/NII	Assistant Secretary of Defense for Networks and Information Integration	IPv6	Internet Protocol version 6
		ISDN	Integrated Services Digital Network
BRI	Basic Rate Interface	ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
C	Conditional		
C2	Command and Control	Mbps	Megabits per second
DIACAP	Department of Defense Information Assurance Certification and Accreditation Process	NX56	56 kilobits per second bit rate in N increments
		PRI	Primary Rate Interface
DISA	Defense Information Systems Agency	R	Required
DoDI	Department of Defense Instruction	STIGs	Security Technical Implementation Guides
DSN	Defense Switched Network	SUT	System Under Test
E1	European Basic Multiplex Rate (2.048 Mbps)	TDM	Time Division Multiplexing
FTR	Federal Telecommunications Recommendation	T1	Digital Transmission Link Level 1 (1.544 Mbps)
FTR1080B-2002	Video Teleconferencing Services	UCR	Unified Capabilities Requirements
GR	Generic Requirements	VTC	Video Teleconferencing
GR-815	Generic Requirements for Network Element/ System Security	VTU	Video Telephony Unit
H.323	Standard for multi-media communications on packet-based networks		

5. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.125 (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi. Due to the sensitivity of the information, the Information Assurance Accreditation Package (IAAP) that contains the approved configuration and deployment guide must be requested directly through government civilian or uniformed military personnel from the Unified Capabilities Certification Office (UCCO), e-mail: ucco@disa.mil.

6. The JITC point of contact is Mr. Brad Friedman, DSN 879-5057, commercial (520) 538-5057, FAX DSN 879-4347, or e-mail to brad.friedman@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The tracking number for the SUT is 0929501.

FOR THE COMMANDER:

2 Enclosures a/s   for RICHARD A. MEADOR
                                                         Chief
                                                         Battlespace Communications Portfolio

JITC Memo, JTE, Special Interoperability Test Certification of the Tandberg® Codec Quick Set C20, Codec C60, Codec C90, and Personal Telepresence EX90 Version TC3.5.0 with Video Communication Server (VCS) Version X5.1

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DOT&E, Net-Centric Systems and Naval Warfare
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Defense Intelligence Agency
National Security Agency, DT
Defense Information Systems Agency, TEMC
Office of Assistant Secretary of Defense (NII)/DOD CIO
U.S. Joint Forces Command, Net-Centric Integration, Communication, and Capabilities Division, J68
Defense Information Systems Agency, GS23

ADDITIONAL REFERENCES

(c)   Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008 Change 1," 22 January 2010

(d)   Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006

(e)   Air Force Test Facility, "Information Assurance (IA) Assessment of Tandberg®, C-Series Codec Family version TC3.5.0 with VCS version X5.1 (Tracking Number 0929501)," 16 August 2010

CERTIFICATION TESTING SUMMARY

1. SYSTEM TITLE. Tandberg® Codec Quick Set C20, Codec C60, Codec C90, and Personal Telepresence EX90 Version TC3.5.0 with Video Communication Server (VCS) Version X5.1, hereinafter referred to as the System Under Test (SUT).

2. PROPONENT. Air Force Network Integration Center Enterprise Capabilities (AFNIC/EC).

3. PROGRAM MANAGER. Lt. Col Tamara Schwartz, ESC/XR, 15 Eglin Street Hanscom Air Force Base, Massachusetts, 01731,
Email: tamara.schwartz@hanscom.af.mil.

4. TESTER. Telecommunication Systems Security Assessment Program (TSSAP) testing facility, 346th Test Squadron at the 318th Information Operations Group (IOG), United States Air Force, San Antonio, Texas.

5. SYSTEM UNDER TEST DESCRIPTION. The SUT is a series of Video Teleconference (VTC) systems that only have a 10/100 Megabits per second (Mbps) Internet Protocol (IP) interface. The C-Series Codec Family connects to a High Definition (HD) monitor and is designed for small to large-sized VTC sessions. The Codec C20 is used for small meeting rooms and can connect two HD outputs with two microphones. The Codec C60 is used for medium sized dedicated video conferencing rooms, and can connect up to four HD sources, two HD outputs and four microphones. The Codec C90 is used for larger applications and can connect up to twelve HD sources with four HD outputs and eight microphones. The EX90 is a desktop VTC with a touch screen interface that provides the same functionality of a large scale VTC system. The VCS provides the core network services that are required for the C-Series Codec Family to operate. These services include, call switching, call admission control, address resolution, and endpoint registration and class of service. The SUT supports the following features which were met through testing or vendor submission of Letters of Compliance (LoC) unless otherwise noted:

- Network Interfaces: 10/100/1000 auto network interface card
- Standards: International Telecommunication Union - Telecommunication Standardization Sector (ITU-T) H.320 up to 2 Megabits per second (Mbps)
- ITU-T H.323
- Audio standards: ITU-T G.711, ITU-T G.722, ITU-T G.722.1, ITU-T G.728, MPEG4 AAC-LD
- Video standards: ITU-T H.261, ITU-T H.263, ITU-T H.263++, ITU-T H.264, ITU-T H.239, ITU-T H.241
- Multi-Control Point compatibility ITU-T H.243, ITU-T H.231, ITU-T H.221, ITU-T H.224/H.281
- Inverse Multiplexing ITU-T H.244

Enclosure 2

6. OPERATIONAL ARCHITECTURE. The Unified Capabilities Requirements (UCR) Defense Switched Network (DSN) architecture in Figure 2-1 depicts the relationship of the SUT to the DSN switches.
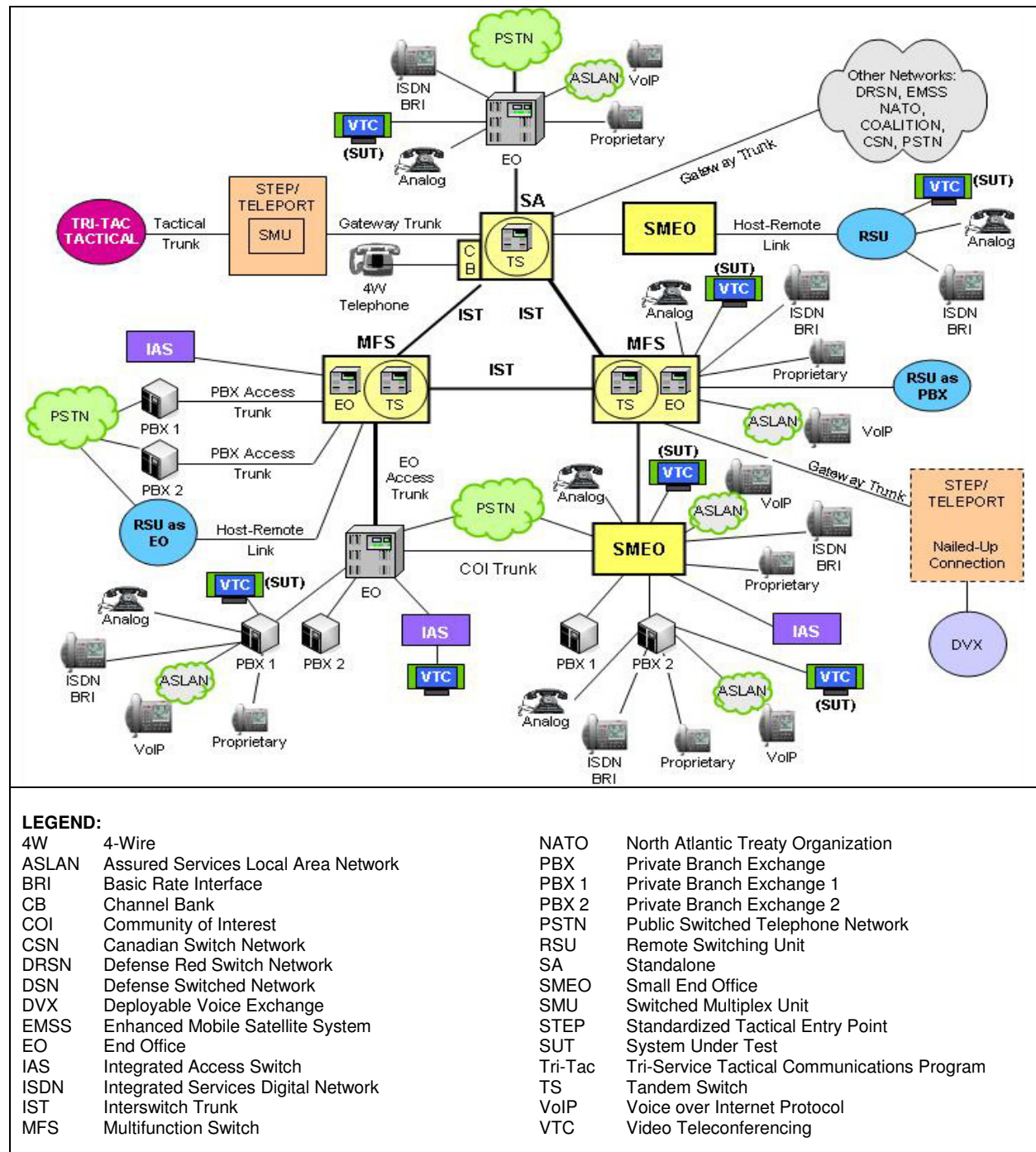

LEGEND:

4W	4-Wire	NATO	North Atlantic Treaty Organization
ASLAN	Assured Services Local Area Network	PBX	Private Branch Exchange
BRI	Basic Rate Interface	PBX 1	Private Branch Exchange 1
CB	Channel Bank	PBX 2	Private Branch Exchange 2
COI	Community of Interest	PSTN	Public Switched Telephone Network
CSN	Canadian Switch Network	RSU	Remote Switching Unit
DRSN	Defense Red Switch Network	SA	Standalone
DSN	Defense Switched Network	SMEO	Small End Office
DVX	Deployable Voice Exchange	SMU	Switched Multiplex Unit
EMSS	Enhanced Mobile Satellite System	STEP	Standardized Tactical Entry Point
EO	End Office	SUT	System Under Test
IAS	Integrated Access Switch	Tri-Tac	Tri-Service Tactical Communications Program
ISDN	Integrated Services Digital Network	TS	Tandem Switch
IST	Interswitch Trunk	VoIP	Voice over Internet Protocol
MFS	Multifunction Switch	VTC	Video Teleconferencing

Figure 2-1. Relationship of the SUT to the DSN Architecture

7. REQUIRED SYSTEM INTERFACES. Requirements specific to the SUT and interoperability results are listed in Table 2-1. These requirements are derived from the Interfaces and Functional Requirements and verified through TSSAP testing and review of the vendor-provided LoC.

Table 2-1. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Functional Requirements	Status	UCR Reference
IP (10/100 Mbps) ITU-T H.323	No[1]	Yes[2]	The VTC system/endpoints shall meet the requirements of FTR1080B-2002. (R)	Met[3]	5.2.4.2
			ITU-T H.323 in accordance with FTR 1080B-2002. (C)	Met	5.2.4.2
			Layer 3 Differentiated Services Code Point tagging as specified in UCR 2008, Change 1, Section 5.3.1. (C)	Met	5.2.4.2
			A loss of any conferee on a multipoint videoconference shall not terminate or degrade the DSN service supporting VTC connections of any of the other conferees on the videoconference. (R)	Met	5.2.4.2
			Physical, electrical, and software characteristics shall not degrade or impair switch and associated network operations. (R)	Met	5.2.4.2
			The VTU IP interface must be IPv6 capable. (R)	Not Met[2]	Table 5.3.5.1
Security	Yes	Certified	GR-815, STIGs and DoDI 8510.bb (DIACAP) (R)	Met[4]	3, 5.4.6

NOTES:
1   The UCR does not state a minimum required interface for a VTC. A VTC can offer any one of the following interfaces: ISDN BRI, Serial, T1 ISDN PRI, E1 ISDN PRI, and IP. The SUT consists of VTC codecs and a video communication server. The SUT only offers an IP (i.e. ITU-T H.323) interface; therefore, the SUT requires an IP to TDM gateway to connect to the DSN. The SUT was tested with the Tandberg® Codian 3241 ISDN gateway version 2.0. The SUT is certified for use with any gateway listed on the UC APL.
2   The SUT met the conditional requirements for an IP interface with the ITU-T H.323 protocol; however, Assured Service is not yet defined for an IP interface with ITU-T H.323 protocol. Therefore, C2 VTC users and Special C2 VTC users are not authorized to be served by an IP interface with the ITU-T H.323 protocol. Furthermore, the SUT does not support IPv6. The ASD/NII granted a waiver for IPv6 until 1 January 2011. As part of the waiver stipulations in accordance with Department of Defense rules of engagement for waivers, the vendor must submit a request by 31 December 2010 to have IPv6 tested before 31 March 2011 or this certification is subject to being removed from the UC APL.
3   The SUT does not support NX56 bonding in accordance with the FTR 1080B-2002. This discrepancy was adjudicated by DISA on 26 January 2010 as having a minor operational impact.
4   Security is tested by Department of Defense Component lab Information Assurance test teams and published in a separate report, Reference (e).

LEGEND:

APL	Approved Products List	H.323	Standard for multi-media communications on packet-based networks
ASD/NII	Assistant Secretary of Defense for Networks and Information Integration	IP	Internet Protocol
BRI	Basic Rate Interface	IPv6	Internet Protocol version 6
C	Conditional	ISDN	Integrated Services Digital Network
C2	Command and Control	ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
DIACAP	Department of Defense Information Assurance Certification and Accreditation Process	Mbps	Megabits per second
		NX56	56 kilobits per second bit rate in N increments
DISA	Defense Information Systems Agency	PRI	Primary Rate Interface
DoDI	Department of Defense Instruction	R	Required
DSN	Defense Switched Network	STIGs	Security Technical Implementation Guides
E1	European Basic Multiplex Rate (2.048 Mbps)	SUT	System Under Test
FTR	Federal Telecommunications Recommendation	TDM	Time Division Multiplexing
		T1	Digital Transmission Link Level 1 (1.544 Mbps)
FTR1080B-2002	Video Teleconferencing Services	UCR	Unified Capabilities Requirements
GR	Generic Requirements	VTC	Video Teleconferencing
GR-815	Generic Requirements for Network Element/System Security	VTU	Video Telephony Unit

8. TEST NETWORK DESCRIPTION. The SUT was tested at the TSSAP in a manner and configuration similar to that of the DSN operational environment. Testing the system's required functions and features was conducted using the test configurations depicted in Figure 2-2.
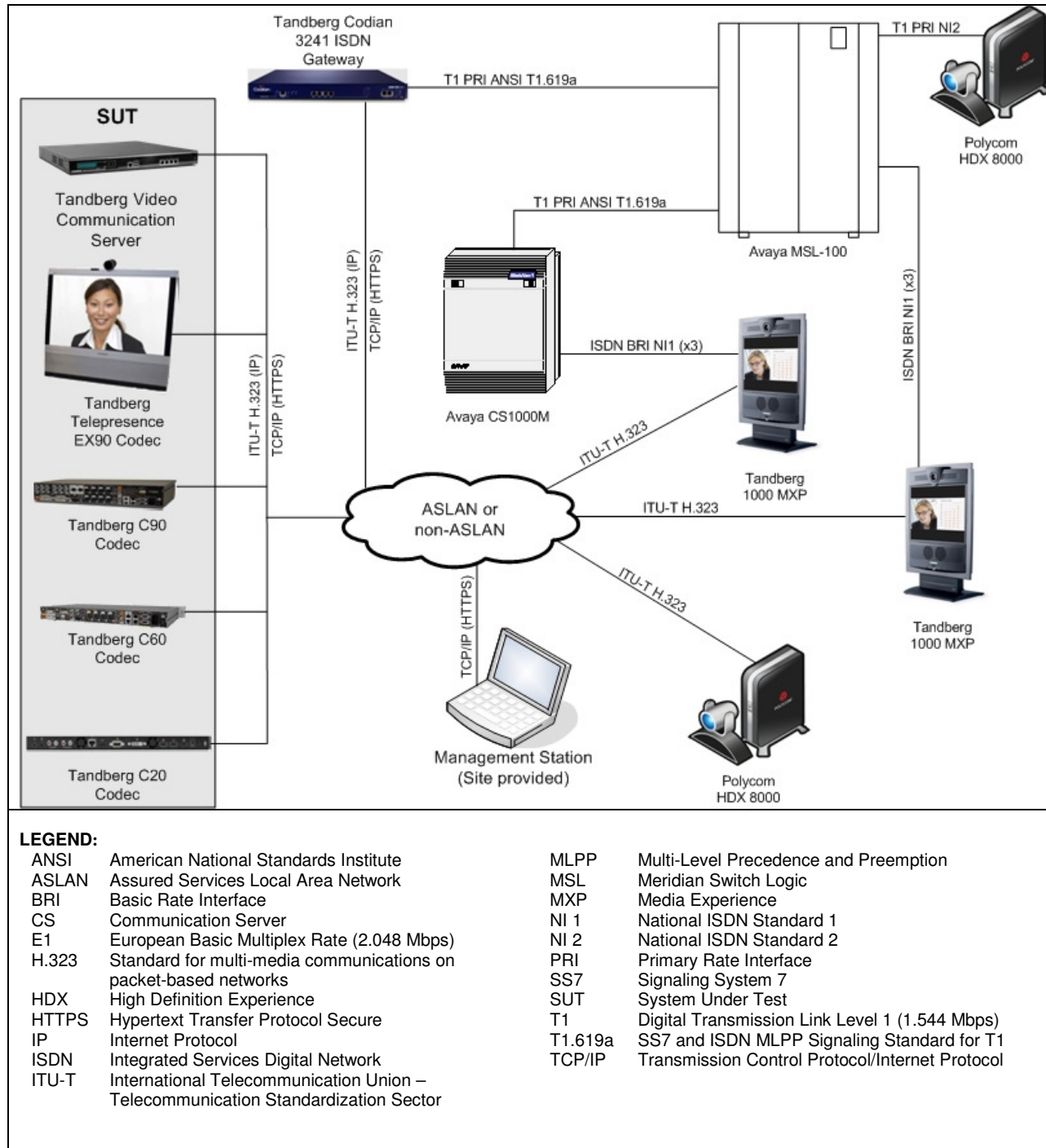

LEGEND:

ANSI	American National Standards Institute
ASLAN	Assured Services Local Area Network
BRI	Basic Rate Interface
CS	Communication Server
E1	European Basic Multiplex Rate (2.048 Mbps)
H.323	Standard for multi-media communications on packet-based networks
HDX	High Definition Experience
HTTPS	Hypertext Transfer Protocol Secure
IP	Internet Protocol
ISDN	Integrated Services Digital Network
ITU-T	International Telecommunication Union – Telecommunication Standardization Sector

MLPP	Multi-Level Precedence and Preemption
MSL	Meridian Switch Logic
MXP	Media Experience
NI 1	National ISDN Standard 1
NI 2	National ISDN Standard 2
PRI	Primary Rate Interface
SS7	Signaling System 7
SUT	System Under Test
T1	Digital Transmission Link Level 1 (1.544 Mbps)
T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
TCP/IP	Transmission Control Protocol/Internet Protocol

Figure 2-2. SUT Test Configuration

9. SYSTEMS CONFIGURATIONS. Table 2-2 provides the system configurations, hardware, and software components tested with the SUT. The SUT was tested in an operationally realistic environment to determine interoperability with a complement of DSN switches noted in Table 2-2. Table 2-2 lists the DSN switches which depict the tested configuration and is not intended to identify the only switches that are certified with the SUT. The SUT is certified with switching systems listed on the Unified Capabilities (UC) Approved Products List (APL) that offer the same certified interfaces. The SUT only offers an IP interface; therefore, the SUT requires an IP to Time Division Multiplexing (TDM) gateway to connect to the DSN. The SUT was tested with the Tandberg® Codian 3241 Integrated Services Digital Network (ISDN) gateway version 2.0. The SUT is certified for use with any gateway listed on the UC APL.

Table 2-2. SUT Test Configuration

System Name	Software Release
Avaya MSL-100	MSL-17
Avaya CS1000M	4.5
Tandberg® Codian ISDN Gateway 3241	Release 1.3
Tandberg® MXP 1000	F7.3.1 NTSC, Security
Polycom® HDX 8000	2.0.5_J-2854
Management PC	Site-provided PC with all STIGs
System Under Test	**Hardware**
Tandberg® EX90 Tandberg® Codec C90 Tandberg® Codec C60 Tandberg® Codec C20	Release TC3.5.0
Tandberg® VCS	Release X5.1

LEGEND:

CS	Communication Server	NTSC	National Television System Committee
HDX	High Definition Experience	PC	Personal Computer
ISDN	Integrated Services Digital Network	STIGs	Security Technical Implementation Guides
MSL	Meridian Switch Logic	SUT	System Under Test
MXP	Media Experience		

10. TEST LIMITATIONS. None

11. TEST RESULTS

   a. Discussion. The VTC system interface requirements can be met with an ISDN BRI, T1 or E1 ISDN PRI, Serial, or ITU-T H.323 interface. Although each interface is conditional, if the SUT offers an interface, it must meet the critical requirements for that interface. If the SUT is an IP only VTC codec, the SUT must use an IP to TDM gateway for connection to the DSN. The SUT minimum critical interoperability interface and functional requirements were met through both interoperability certification testing conducted at the TSSAP and review of the vendor's LoC. Bonding mode 1 was tested to requirements defined in UCR 2008, Change 1, Section 5.2.4.2 and Federal Telecommunications Recommendation (FTR) 1080B-2002. Bonding, often referred to as channel aggregation, takes place through inverse multiplexing. Inverse multiplexing

takes a high-bandwidth signal and splits it for transport through the network over multiple lower-bandwidth channels. At the receiving end, the multiple, lower-bandwidth signals are recombined into the original high-bandwidth signal. Bonding for the SUT is accomplished through the gateway. Test calls completed in accordance with requirements defined in UCR 2008, Change 1, Section 5.2.4.2 and FTR 1080B-2002. The SUT received inbound calls and placed outbound calls to various VTC codecs. The successful tests demonstrated the SUT's ability to participate in high-speed VTC conferences.

Seven- and ten-digit calls were placed to verify that the SUT met the capability to support both the North American Numbering Plan and the DSN World Wide Numbering and Dialing Plan (WWNDP) defined in UCR 2008, Change 1, Section 5.2.6.2 (UCR 2008, Section 5.2.3.5.1). Multilevel precedence video calls were placed from the SUT and established within the DSN at the respective precedence level dialing the DSN WWNDP access code (e.g. 93: Priority, 92: Immediate, 91: Flash, etc.). The SUT has the ability to prefix any DSN 7 or 10 digit number with a 9X access code which meets this requirement. A passed test result was based on 100 percent of the calls receiving a score of four or better on the subjective quality scale as defined in Table 2-3.

Table 2-3. Video and Voice Subjective Quality Scale

Rating	Reference	Definition
1	*Unusable*	Quality is unusable. Voice and video may be heard and seen but is unrecognizable.
2	Poor	Quality is unusable. Words and phrases are not fully understandable or video cannot be properly identified.
3	Fair	Quality is seriously affected by distortion. Repeating words and phrases are required to convey speech or video is seriously impacted and barely recognizable.
4	Good	**Quality is usable. Audio or video is not impaired but some distortion is noticeable**
5	Excellent	Quality is unaffected. No discernable problems with either audio or video.

NOTE: Audio and video quality during a conference will receive a subjective rating on the Data Collection Form. A rating of lower than 4 on this reference scale is considered a failure.

b. Test Conduct. Multiple two-way 64 kbps – 1.920 Mbps test calls at different durations (5-minute, 30-minute, 1-hour, 24-hours) were placed over the test network shown in Figure 2-2 via all the combinations depicted in Table 2-1. The VTC test calls were placed at various precedence levels over the test configurations depicted in Figure 2-2. The UCR, 5.2.12.4.5 requirements state:

(1) The VTC system/endpoints shall meet the requirements of FTR 1080B-2002. The SUT does not support NX56 bonding in accordance with the FTR. This discrepancy was adjudicated by DISA on 26 January 2010 as having a minor operational impact. The SUT met the remaining requirements through testing and review of the vendor's LoC.

(2) The VTC features and functions used in conjunction with IP network services shall meet the requirements of ITU-T H.323 in accordance with FTR 1080B-2002. Additionally, ITU-T H.323 video end instruments must meet the tagging requirements as specified in UCR 2008, Section 5.2.12.8.2.9, Voice over IP System

Service Class Tagging Requirements. This requirement was met by the SUT. The SUT has the ability to apply a Service Class Tag for signaling and video media at any value 0 to 63 for IP version 4. This was verified through testing by capturing traffic from and to the SUT with a packet capture utility. These captures were analyzed to verify proper tagging requirements were met. The SUT does not support IPv6. The ASD/NII granted a waiver for IPv6 until 1 January 2011. As part of the waiver stipulations in accordance with Department of Defense rules of engagement for waivers, the vendor must submit a request by 31 December 2010 to have IPv6 tested before 31 March 2011 or this certification is subject to being removed from the UC APL.

       (3) A loss of any conferee on a multipoint videoconference shall not terminate or degrade the DSN service supporting VTC connections of any of the other conferees on the videoconference. This was tested during each session established with the SUT by disconnecting single and multiple conferees. This was done by hanging up and simulating a failure by disconnecting the physical interface or by preempting both participating conferees and other precedent users. During these tests, the remaining conferees were not affected and remained in the conference.

       (4) The physical, electrical, and software characteristics of Video Teleconferencing Unit system(s)/endpoint(s) that are used in the DSN network shall not degrade or impair the serving DSN switch and its associated network operations. This was tested by conducting other tests on the serving DSN switch while point-to-point and multipoint video sessions were established. During these tests, the SUT physical, electrical, and software characteristics did not impair the serving DSN switch and its associated operations.

       (5) The UCR 2008, Change 1, Sections 3 and 5.4.6 state the Information Assurance requirements for the SUT. These requirements are tested by Department of Defense Component lab Information Assurance test teams and results are published under a separate report, Reference (e).

   c. Test Summary. The SUT met the critical interface and functional requirements for a VTC system for the interfaces depicted in Table 2-1, as set forth in Reference (c), and is certified for joint use within the DSN. The SUT met the requirements for an IP interface with the ITU-T H.323 protocol; however, Assured Service is not yet defined for an IP interface with the ITU-T H.323 with the protocol. Since the IP interface with the ITU-T H.323 protocol does not provide Assured Services during a crisis or contingency, users' access to the DSN will be on a best effort basis. Therefore, Command and Control (C2) VTC users and Special C2 VTC users are not authorized to be served by an IP interface with the ITU-T H.323 protocol. The SUT only offers an IP interface; therefore, the SUT requires an IP to TDM gateway to connect to the DSN. The SUT was tested with the Tandberg® Codian 3241 ISDN gateway version 2.0. The SUT is certified for use with any gateway listed on the UC APL.

12. TEST AND ANALYSIS REPORT. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses

Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.125 (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi. Due to the sensitivity of the information, the Information Assurance Accreditation Package (IAAP) that contains the approved configuration and deployment guide must be requested directly through government civilian or uniformed military personnel from the Unified Capabilities Certification Office (UCCO), e-mail: ucco@disa.mil.